

AMENDMENT TO THE CLAIMS:

This listing of claims will replace all prior versions of claims in the application:

LISTING OF CLAIMS:

1. (ORIGINAL) A method for increasing reliability during a read and/or write operation in a disk drive having a head, comprising:
reading data from a disk using a head;
measuring an amplitude of a signal obtained during reading the data;
determining a degree of variation in the signal amplitude as a function of a position of the head relative to the disk; and
selectively heating the head based on the variation in the signal amplitude for inducing protrusion of the head, thereby selectively reducing a fly height of the head.
2. (ORIGINAL) A method as recited in claim 1, wherein the selective heating corresponds to the variation of the amplitude of the signal at various radial positions relative to the disk.
3. (ORIGINAL) A method as recited in claim 1, wherein the degree of signal amplitude variation relates to variations in the fly height of the head over various portions of the disk.
4. (ORIGINAL) A method as recited in claim 1, further comprising writing the data to the disk prior to reading the data from the disk.
5. (ORIGINAL) A method as recited in claim 1, wherein the head is selectively heated for inducing protrusion of the head to a selected fly height at a particular radial position of the head with respect to the disk.
6. (ORIGINAL) A method as recited in claim 5, wherein the fly height is selected based on an average fly height of the head over selected portions of the disk.
7. (ORIGINAL) A method as recited in claim 1, wherein the signal amplitude variations are determined using a modulation detector.
8. (ORIGINAL) A method as recited in claim 1, wherein the signal amplitude variations are determined by measuring a gain of the signal created by the head.
9. (ORIGINAL) A method as recited in claim 1, wherein more heating is performed when the head is positioned towards an inner diameter of the disk.

HIT1P030/HSJ9-2003-0155US1

- 2 -

10. (CURRENTLY AMENDED) A method as recited in claim 1, further comprising continuously varying an extent of the heating based on the variation in the signal amplitude.
11. (ORIGINAL) A method as recited in claim 1, wherein the heating is constant during operation of the drive, wherein the protrusion is induced according to an extent of the heating.
12. (CURRENTLY AMENDED) A method for increasing reliability during a read and/or write operation in a disk drive having a head, comprising:
writing data to a disk;
reading the data from [[a]] the disk using a head;
measuring an amplitude of a signal obtained during reading the data;
determining a degree of variation in the signal amplitude as a function of a position of the head relative to the disk; and
selectively heating the head based on the variation in the signal amplitude for inducing protrusion of the head to a selected fly height at a particular radial position of the head with respect to the disk, the selective heating further including varying an extent of the heating;
wherein the signal amplitude variations are determined either by using a modulation detector, or by measuring a gain of the signal created by the head.
13. (ORIGINAL) A method as recited in claim 12, wherein the selective heating corresponds to the variation of the amplitude of the signal at various radial positions relative to the disk.
14. (ORIGINAL) A method as recited in claim 12, wherein the degree of signal amplitude variation relates to variations in the fly height of the head over various portions of the disk.
15. (CURRENTLY AMENDED) A method as recited in claim 12, further comprising ~~writing the data to the disk prior to reading the data from the disk~~ mapping fly height variations of the head relative to the disk based on the variation in the signal amplitude, and selectively heating the head at selected radial positions based on the fly height variations for inducing protrusion of the head, thereby selectively reducing a fly height of the head.
16. (CURRENTLY AMENDED) A method as recited in claim ~~[[15]]~~ 12, wherein the fly height is selected based on an average fly height of the head over selected portions of the disk.
17. (CURRENTLY AMENDED) A method as recited in claim 12, wherein the ~~signal amplitude variations are determined using a modulation detector~~ heating includes heating a silicon-containing polymer in the head.

HIT1P030/HSJ9-2003-0155US1

- 3 -

18. (CURRENTLY AMENDED) A method as recited in claim 12, ~~wherein the signal amplitude variations are determined by measuring a gain of the signal created by the head~~ 17, wherein the silicon-containing polymer is only partially cured.
19. (ORIGINAL) A method as recited in claim 12, wherein more heating is performed when the head is positioned towards an inner diameter of the disk.
20. (ORIGINAL) A method as recited in claim 12, wherein the heating is constant during operation of the drive, wherein the protrusion is induced according to an extent of the heating.
21. (ORIGINAL) A method for increasing reliability during a read and/or write operation in a disk drive having a head, comprising:
mapping height variations of a surface of a disk; and
selectively heating the head at selected radial positions based on the disk surface height variations for inducing protrusion of the head, thereby selectively reducing a fly height of the head.
22. (ORIGINAL) A method as recited in claim 21, wherein the disk height variations are mapped using a modulation detector.
23. (ORIGINAL) A method as recited in claim 21, wherein the disk height variations are mapped by measuring a gain of a read signal created by the head.
24. (ORIGINAL) A method as recited in claim 21, wherein the disk height variations are mapped using a device that measures physical contours of the disk surface.
25. (ORIGINAL) A method as recited in claim 21, wherein the selective heating corresponds to the variation of the amplitude of the signal at various radial positions relative to the disk.
26. (ORIGINAL) A method as recited in claim 21, wherein the head is selectively heated for inducing protrusion of the head to a selected fly height at a particular radial position of the head with respect to the disk.
27. (ORIGINAL) A method as recited in claim 26, wherein the fly height is selected based on an average fly height of the head over selected portions of the disk.
28. (ORIGINAL) A method as recited in claim 21, wherein more heating is performed when the head is positioned towards an inner diameter of the disk.
29. (ORIGINAL) A method as recited in claim 21, further comprising varying an extent of the heating based on the height variations of the disk.

HIT1P030/HSJ9-2003-0155US1

- 4 -

30. (ORIGINAL) A method as recited in claim 21, wherein the heating is constant during operation of the drive, wherein the protrusion is induced according to an extent of the heating.
31. (ORIGINAL) A magnetic storage system, comprising:
 - magnetic media;
 - at least one head having a heater;
 - a slider for supporting the at least one head; and
 - a control unit coupled to the head for controlling operation of the head;wherein the magnetic storage system performs the method of claim 1.
32. (ORIGINAL) A magnetic storage system, comprising:
 - magnetic media;
 - at least one head having a heater;
 - a slider for supporting the at least one head; and
 - a control unit coupled to the head for controlling operation of the head;wherein the magnetic storage system performs the method of claim 21.

HIT1P030/HSJ9-2003-0155US1

- 5 -